

# IMPELLOR™ II

## HIGH PERFORMANCE TAPE LOOP TRANSPORT

UNEXCELLED FOR:

- Fast Power Spectral Density Analysis
- Correlation Studies
- Wide Range, Wide Bandwidth Time Delay Synthesis
- Pre and Post Fault/Transient Recording



FEATURES: 7½ to 240 ips Tape Speeds—in six binary steps.

High Loop Repetition Rates—up to 6.7 per second.

Superior, Low Wear Tape Handling—achieved by pinch rollerless vacuum drive, tensioning, and buffering.

Reliable, Stable Machine Performance—resulting from the use of pneumatic techniques and dynamic braking.

### S. HIMMELSTEIN AND COMPANY

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# IMPELLOR II Technical Specifications

**Tape Speeds:** Six fixed speeds in two ranges. High Range—240 ips, 120 ips, 60 ips. Low Range—30 ips, 15 ips, 7.5 ips. Range switching is accomplished by changing drive belt position.

**Tape Speed Stability:** Long-term speed variation is less than 0.25% assuming constant line frequency and voltage.

**Absolute Tape Speed Accuracy:**  $\pm 0.25\%$  assuming 60 cps power line frequency.

**Wow and Flutter:** At a tape speed of 120 ips, maximum cumulative peak-to-peak flutter measured over a bandwidth from 1 to 10,000 cps is 0.8% with a gravity loop store; 2% with a Standard Cartridge loop store; and 0.75% with the Optional Magazine loop store.

**Start Time:** Less than 10 seconds at 240 ips and 3 seconds at 30 ips.

**Stop Time:** Less than 5 seconds from 240 ips and 2 seconds from 30 ips.

**Tape Tension:** Continuously adjustable to 16 ounces per inch of tape width.

**Tape Width:** Machine comes equipped to handle a single tape width;  $\frac{1}{4}$ ",  $\frac{1}{2}$ " or 1" as ordered. Other tape width change kits can be supplied as optional equipment.

**Tape Type:** Handles paper, plastic and metal base tapes.

**Tape Thickness:** Overall thickness between 0.00025" and 0.010".

**Adjustable Head Positioners:** As an extra cost option, two-axis adjustable head plates can be provided. They are interchangeable with standard fixed units and provide a total head travel of 2.25" along the tape and 1.00" across the tape. Positional information readout is accurate to 0.001".

**Fixed Head Baseplates:** One each standard Upper and Lower baseplates are supplied. Each baseplate has 2 miniature 36 Pin Blue Ribbon Connectors installed; Type 57-10360. Additional baseplates are available at nominal cost.

**Loop Capacity:** 5' to 50' for Standard Cartridge, 36" to approximately twice the maximum available vertical free drop for a gravity Loop and 10' to 650' (1.5 mils thick) for the optional Magazine. IMPELLOR II comes equipped with one Standard Cartridge for  $\frac{1}{4}$ ",  $\frac{1}{2}$ " or 1" wide tape as specified, loaded with  $48 \pm 2$  feet of instrumentation grade tape. A cartridge with 100' capacity is available as optional equipment.

**Controls and Indicators:** ON/OFF Switch is coupled to the Speed Control. Two illuminated pushbutton switches are used for tape START and STOP

**Remote Control:** Tape motion can be remotely controlled via input to rear connector. Control requirements are: RUN—Floating Contact Closure, STOP—Open Run Contacts. Front panel mounted lights and tape speed monitor function in REMOTE Mode.

**Input Power:** 105 to 125 volts, 60 cps, single phase at 7.5 amperes, maximum.

**Size:**  $8\frac{3}{4}$ " of vertical mounting space and  $18\frac{1}{8}$ " of depth in standard 19" rack. Additional outboard vertical space required for loop storage.

**Weight:** 165 pounds.

**Slide Mounts:** Mounting slides are available as an extra cost option.

**Standard Accessories:** IMPELLOR comes equipped with a line cord and mating connectors for Remote control and Heads.

**Head Cabling:** At extra cost, baseplate receptacle connectors may be connected via coaxial cabling to 4 output connectors at the rear chassis; 36 pin Miniature Blue Ribbon, Type 57-40360.

**Tape Guides:** Non-magnetic stainless steel guides for  $\frac{1}{4}$ ",  $\frac{1}{2}$ " and 1" wide tape are available at extra cost. When mounted on IMPELLOR baseplates, they correctly center the tape path and accurately reference the tape edge to the head mounting reference surface.

**Head Mounting Service:** If desired, customer supplied heads and guides can be factory mounted and wired on standard or adjustable baseplates. Send drawings showing envelope, mounting arrangement with tolerances, desired wrap angle and electrical connections for a quotation.

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